

REMARKS

Claims 1 – 16 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner stated that the terms “the components, said several components” in claim 10 lacked proper antecedent basis.

Claim 10, line 6 is amended to recite “each of said several components.” It is believed that “said several components” has a proper antecedent basis. Claims 11 – 16 depend from claim 10. Claims 11 – 13 are amended as necessary to correspond with the changes made to claim 10. Accordingly, applicants respectfully request that the rejection of claim 10 - 16 pursuant to 35 U.S.C. § 112, second paragraph, be withdrawn.

Furthermore, the Examiner stated:

As to claim 1, at lines 6 – 8, it is not clearly understood what “data acquisition, by means of the running time system, of data of a second component into said first component” means (i.e., is data acquisition of the second component calls the first component); at lines 8 – 11, it is not clearly understood what “data disposal, by means of the running time system, of data of said first component into said second component” means (i.e., is data disposal of the first component calls the second component).

Claim 1 is amended to recite:

- a) acquiring for said first component, by means of the running time system, data from a second component of said several components without any need for programmer-defined interfaces in said second component, wherein the source of the data to be acquired within said second component is selected according to a definition of said first component; and
- b) disposing from said first component, by means of the running time system, data into said second component without any need for programmer-defined interfaces in said second component, wherein a target to which said data is to be deposited within said second component is selected according to a definition of the first component.

It is believed that claim 1, as presently amended, overcomes the Examiner’s rejection. Claims 2 – 9 depend from claim 1 and are amended to correspond with the changes made to claim 1. Accordingly, applicants respectfully request that the rejection of claim 1 - 9 pursuant to 35 U.S.C. § 112, second paragraph, be withdrawn.

Claims 1, 3 – 6, and 8 – 15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Purtilo “Improving module reuse by interface adaptation,” p. 208 – 217 in view of Srivastava (U.S. Patent Number 6,473,768 B2).

With respect to claim 1, the Examiner stated:

As to claim 1, Purtilo teaches a program flow method in a program component system, comprising a running time system (system can create an

execution-time module, p. 208 col. 2 paragraph 1) and several components (components, p. 210 col. 2 paragraph 3), each having one program portion, the method comprising the steps of a) data acquisition (calling module, p. 210 paragraph 4) by means of the running time system (runtime, p. 208, col. 1 last paragraph), of data of a second component into said first component.
b) data disposal (called module, p. 210 paragraph 1), by means of the running time system, of data of said first component into said second component.

The Examiner further stated:

Purtilo teaches first and second components programmer-defined interfaces. However, Purtilo does not explicitly teach first and second components independent of programmer-defined interfaces. Srivastava teaches components calling without any need for programmer-defined interfaces (add new components with interfaces at runtime, see abstract and col. 3 lines 55 – col. 4 lines 19, col. 5 lines 15 – 67, and col. 7 lines 30 – col. 8 lines 50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Purtilo and Srivastava's because Srivastava's creating new component with interfaces at runtime would provide the ability to handle more interfaces or components to the calling or called components without pre-defined interfaces, and so the system can handle more flexible data requests.

Claim 1 is amended to recite "that are performed after a first component of said several components has been called", "wherein the source of the data to be acquired within said second component is selected according to a definition of said first component", and "wherein a target to which said data is to be deposited within said second component is selected according to a definition of the first component".

Support for the current amendments to claim 1 can be found on pages 3 and 14 of the specification. More specifically, page 3, lines 20 – 25, of the specification disclose that data acquisition and data disposal take place after the first component has been called. Additionally, page 14, lines 1 - 14 of the specification disclose that the source of the data to be acquired by the first component and the target to which the data is to be deposited are defined by means of an INH-DATA-IME definition of the first component.

It is respectfully submitted that Purtilo and/or Srivastava fail to teach selecting the source of the data to be acquired within said second component and/or selecting the target to which said data is to be deposited within said second component according to a definition of said first component. In contrast, Purtilo teaches, for example, that the calling component (i.e., the employee record database) supplies the called component (i.e., the envelope printing routine) with data whose source is defined in the calling component (e.g., Employee Name: str, Address: str[4], Sex: str, Age: int, SocNum: int, Salary: float). Purtilo further teaches that a translation program (i.e., NIMBLE) is used to adapt the data into a format that is acceptable to the called component (e.g., Sex: int, Name: str, Address: str[4]). (See, Purtilo page 209,

last paragraph – page 211, first paragraph.) It is respectfully submitted that Purtilo fails to teach selecting the source of the data to be acquired within said second component and/or selecting the target to which said data is to be deposited within said second component according to a definition of said first component.

Srivastava is directed to components having a modifier engine, responsive to software tools, inserted therein. (See col. 3, line 24 – 30.) Srivastava teaches that modifications to the application may be made while the application is executed using the modifier engine. (See col. 3, line 24 – 30.) It is respectfully submitted that Srivastava fails to teach selecting the source of the data to be acquired within said second component and/or selecting the target to which said data is to be deposited within said second component according to a definition of said first component.

Furthermore, the present invention departs from the traditional principles of computer science and, in fact, reverses them. After the first component has been called, data acquisition is performed wherein the source of the data to be acquired by the first component is selected according to a definition of the first (i.e., called) component. This reverses the usual principle (e.g., used by both Purtilo and Srivastava) that the calling component supplies the called component with data whose source is defined in the calling component. Likewise, during execution of the first component, data disposal is performed wherein the target to which the data is to be deposited is selected according to a definition of the first (i.e., currently executed) component. This reverses the usual principle that the executed component just returns the resultant data to the calling component without any control as to where this data will be stored or further used.

Neither Purtilo nor Srivastava teach that the source of the data to be acquired by the first (i.e., called) component is selected according to a definition of this component. Instead, the called component is supplied with the data in the "usual" way by the calling component. Furthermore, neither Purtilo nor Srivastava disclose that the target to which the data is to be deposited is selected according to a definition of the first (i.e., currently executed) component.

For the reasons discussed above, it is believed that claim 1 is in condition for allowance. Accordingly, applicants respectfully request that the rejection of claim 1 under 35 U.S.C. § 103(a) in view of Purtilo and Srivastava be withdrawn.

Claims 3 – 6 and 8 – 9 depend from allowable claim 1. Thus, it is believed that claims 3 – 6 and 8 – 9 are in condition for allowance. Accordingly, applicants respectfully request that the rejection of claims 3 – 6 and 8 – 9 under 35 U.S.C. § 103(a) in view of Purtilo and Srivastava be withdrawn.

With respect to claim 10, the Examiner stated:

Purtilo teaches the steps of: docking points (annotated actual parameter list is provided, p. 210 col. 2 paragraph 5) corresponding to an inheritance parameter; b) modifying the components where at least one docking point was found by entering call information (the annotated actual parameter list is provided so that the programmer can pick and choose, p. 210 col. 1 section 2.1 and col. 2 paragraph 5) at each docking point found.

It is respectfully submitted that the Examiner has misconstrued the teachings of Purtilo. Claim 10 recites "modifying each of said several components of the program component system in which at least one docking point was found". In contrast, Purtilo teaches that modifications are not made to any component. More specifically, Purtilo states "The central idea is to provide this parameter-coercion capability without changing the source code of the modules involved." (See page 208, right column, lines 5 – 7, emphasis added.) Purtilo therefore teaches away from the subject matter of claim 10. Instead of changing any existing module, Purtilo teaches the creation of an additional execution-time module to perform the coercion during each invocation. (See page 208, right column, lines 12 - 13). It is respectfully submitted that, Srivastava fails to provide the missing teachings. Thus, it is believed that claim 10 is in condition for allowance. Accordingly, applicants respectfully request that the rejection of claim 10 under 35 U.S.C. § 103(a) over Purtilo in view of Srivastava be withdrawn.

Claims 11 – 15 depend from allowable claim 10. Thus, it is believed that claims 11 – 15 are in condition for allowance. Accordingly, applicants respectfully request that the rejection of claims 11 – 15 under 35 U.S.C. § 103(a) in view of Purtilo and Srivastava be withdrawn.

Claims 2 and 7 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Purtilo "Improving module reuse by interface adaptation," p. 208 – 217, in view of Srivastava (U.S. Patent Number 6,473,768), and further in view of Craze (U.S. Pat. No.: 5,809,564).

Claim 2 and 7 depend from allowable claim 1. As discussed above in conjunction with claim 1, Purtilo and Srivastava fail to teach selecting the source of the data to be acquired within said second component and/or selecting the target to which said data is to be deposited within said second component according to a definition of said first component. It is respectfully submitted that, Craze fails to provide the missing teachings. Thus, it is believed that claims 2 and 7 are in condition for allowance. Accordingly, applicants respectfully request that the rejection of claims 2 and 7 under 35 U.S.C. § 103(a) over Purtilo in view of Srivastava and in further view of Craze be withdrawn.

Claim 16 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Purtilo "Improving module reuse by interface adaptation," p. 208 – 217, in view of Srivastava (U.S. Pat. No.: 6,473,768), and in further view of Nilsen (U.S. Pat. No.: 6,438,573).

Claim 16 depends from allowable claim 10. As discussed above in conjunction with claim 10, Purtilo and Srivastava fail to teach "modifying each of said several components of the program component system in which at least one docking point was found". It is respectfully submitted that, Nilsen fails to provide the missing teachings. Thus, it is believed that claim 16 is in condition for allowance. Accordingly, applicants respectfully request that the rejection of claim 16 under 35 U.S.C. § 103(a) over Purtilo in view of Srivastava and in further view of Nilsen be withdrawn.

Applicants have made a diligent effort to place the instant application in condition for allowance. Accordingly, a Notice of Allowance for claims 1 – 16 is earnestly requested. If the Examiner is of the opinion that the instant application is in condition for disposition other than by allowance, he is respectfully requested to contact applicants' attorney at the phone number listed below so that additional changes to the claims may be discussed.

Respectfully submitted



Richard J. Coldren
Reg. No. 44,084
Thorp Reed & Armstrong, LLP
One Oxford Centre
301 Grant Street, 14th Floor
Pittsburgh, PA 15219-1425
(412) 394-2442

Attorneys for Applicants

Dated: 22 February 2005